(–40.2%, p = 0.0007) and fewer physician visits (–4.4%, p = 0.0259), than those on SAL/FLU, after controlling for baseline characteristics. The BUD/FORM patients were less likely to switch to an alternative ICS + LABA combination (OR = 0.58, p = 0.0067). Numbers of hospitalisations, referrals and work absences did not differ between groups. **CONCLUSION:** BUD/FORM was associated with a lower probability of treatment switches, fewer acute exacerbations, and with similar or lower resource utilisation compared with SAL/FLU. Although the groups appeared well matched at treatment initiation, these results should be interpreted with caution given the observational nature of this study.

PAA17

PHYSICIAN ADHERENCE TO NATIONAL ASTHMA PRESCRIBING GUIDELINES: EVIDENCE FROM U.S. OUTPATIENT VISITS

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OBJECTIVES: EPR-2 guidelines were developed to improve medication prescribing for patients with persistent asthma and to control acute exacerbations of asthma. In addition these guidelines also encourage physician provided asthma education. Little is known about prescribing adherence to EPR-2 guidelines. This study examined physician adherence to EPR-2 asthma medication prescribing guidelines and determine patient and physician factors associated with prescribing of asthma medications. **METHODS:** This study was a cross-sectional retrospective analysis of complex NAMCS physician visit survey data from 1998 through 2004. Data were extracted on all patient s with an ICD-9 code for asthma (493.XX) and reason for visit as 'asthma'. Unit of analysis was individual patient visit. Dependent variables in analyses were specific type of drug class. Independent variables were various patient and physician factors. Logistic regression analysis was used to assess study objectives. **RESULTS:** Asthma patients in 2002 were 3.3 times more likely to be prescribed controller medications compared in 1998. Findings in 2004 were not significant. Elderly patients were 54% as likely to receive controller medication compared to the 35–64 year age group. Patients other than whites or African Americans are 40% as likely to receive controller asthma medication compared to whites. Physicians were 6.3 times more likely to prescribe long acting beta agonists compared to 1998. Physicians without ownership stake in their practice were 1.9 times more likely to provide asthma education to their patients compared to those who owned their practice. **CONCLUSION:** This study using US outpatient setting data provides evidence that physician prescribing of asthma pharmacotherapy in the US does not adequately comply with EPR-2 treatment guidelines.

PAA18

USING CLAIMS DATA TO MODEL THE BUDGETARY IMPACT OF A NEW TREATMENT FOR RHINITIS

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OBJECTIVES: Medical care costs for rhinitis are primarily driven by patient care-seeking behavior and physician prescribing patterns, which may evolve over time. Estimating a model of real-world rhinitis treatment from clinical trial data is not feasible due to short trial durations and protocol-driven care. Therefore, we used U.S. health care claims data to model rhinitis treatment patterns and estimate the budgetary impact of a novel rhinitis therapy. **METHODS:** We developed a three-year budgetary impact model of rhinitis using Markov-modeling techniques. Transitions between treatment regimens (monotherapy, dual-combination therapy, tri-combination therapy), treatment patterns, (therapy switching, add-on rates), and associated medical-care costs, were estimated from a large claims database, by identifying rhinitis patients and tracking changes in therapy over time. Budgetary impact of a novel treatment was assessed for three effectiveness scenarios, where the switching/add-on rates relative to fluticasone propionate, an existing rhinitis therapy, were 50% lower (Scenario 1), 25% lower (Scenario 2) and identical (Scenario 3). The novel treatment was assumed to be priced the same as fluticasone propionate and have a market share of 10%. **RESULTS:** The claims analysis found annual rates of treatment switching, add-on, and remaining on initial therapy ranging from 6–18%, 20–28%, and 62–72%, respectively, for currently existing rhinitis therapies. Annual rhinitis-related medical costs associated with each treatment pattern were $666, $657, and $558, respectively. In Scenario 1, the model predicted the per-patient-per-month (PPPM) budgetary impact for the novel treatment to be –$0.06, –$0.09, and –$0.11, in years 1–3, respectively. Scenarios 2 and 3 had corresponding PPPM results of $0.00, –$0.01, and –$0.01, and $0.05, $0.06, $0.08. **CONCLUSION:** Using claims data and Markov-modeling techniques, we found that budgetary impact can be materially affected by rates of treatment switching/add-on. Detailed, claims-based data are required for this type of analysis, given the real-world nature of treatment patterns and associated medical costs.

PAA19

BI-MODALITY IN DISTRIBUTION OF MEDICATION POSSESSION RATIOS FOR ASTHMA CONTROLLER THERAPIES

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OBJECTIVES: We hypothesized that the average medication possession ratio (MPR) for controller medications in adult asthmatic populations may be misleading as a basis for evaluating adherence. **METHODS:** MPR distributions were determined from analysis of the Pharmetrics database for the period April 2004 to March 2005. We assessed MPRs for those plan members exclusively on one of the three major controller medication groups: inhaled corticosteroids, combined inhaled corticosteroids and long acting beta agonists, and leukotriene modifiers. MPR were defined in terms of annual days supplied (range 0 to 1.0). **RESULTS:** Overall, for the study population (n = 17,581) 5,806 were exclusively on combination therapy (33.8%), 2,689 were exclusively on leukotriene modifiers (15.3%) and 2,106 exclusively on inhaled corticosteroids (12.0%). Average (median) MPRs were 0.51 (0.57) for combination therapy; 0.55 (0.63) for leukotriene modifiers; and 0.39 (0.33) for inhaled corticosteroids. Distributions of MPRs for these groups showed significant bi-modality (a "U" shaped MPR profile). This characteristic was most pronounced for the combined controller group medications and the leukotriene modifiers where the frequency distributions were almost identical. For the combined medications 32.2% of adults reported a MPR < 0.2, with 19.0% and 28.9% reporting MPRs of 0.6 to 0.79 and 0.8 to 1.0 respectively. The corresponding estimates for leukotriene modifiers were 27.5%, 19.6% and 33.1% respectively. For inhaled corticosteroids, 45.2% of patients reported an MPR < 0.2 with only 33.2% reporting an MPR > 0.6 (15.5% > 0.8). **CONCLUSION:** This analysis confirms the hypothesis that average MPR may be a misleading indicator of adherence in patients taking combined controller medications and leukotriene modifiers. We suggest an approach